



**CHRISTOPHER B. BURKE ENGINEERING, LTD.**

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June 5, 2017

SPACECO, Inc.  
9575 W. Higgins Road, Suite 700  
Rosemont, IL 60018

Attention: Peter Bator, P.E.

Subject: Wetland/Waters of the U.S. Assessment for the Crawford Site, Chicago, Cook County, Illinois (CBBEL Project No. 170268)

Dear Mr. Bator:

On May 31, 2017, Christopher B. Burke Engineering, Ltd. (CBBEL) completed a wetland and waters assessment of the property located at the intersection of West 33<sup>rd</sup> Street and South Pulaski Road, in Chicago, Cook County, Illinois (Exhibit 1). Geographically the study area is located in Section 35, Township 39 North, Range 13 East, of the Third Principal Meridian. The study area is centered near Latitude 41.830182° North, Longitude -87.721523° West.

The Chicago Sanitary and Ship Canal, a navigable waterway, was identified as a waters of the United States along the south study area boundary. In addition, six investigated areas were identified within the study area. The approximate ordinary high water mark (OHWM) of the canal and investigated area boundaries are depicted on the Exhibit 6 aerial photograph.

The attached report describes the Chicago Sanitary and Ship Canal and the six investigated areas and describes the methodology and reference material used to assist in the assessment. Representative site photographs are also included within Exhibit 7. This assessment is based on field conditions at the time of the CBBEL site visit and our understanding of current federal, state and local regulations. An evaluation of historic site conditions was not performed.

The Chicago Sanitary and Ship Canal is regulated by the U.S. Army Corps of Engineers (USACE) as a waters of the U.S. under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. If development were to occur within or adjacent to the Chicago Sanitary and Ship Canal, a Section 10 and/or 404 permit may be required by the USACE.

The six investigated areas consisted of two drainage swales (Investigated Area 1) and five detention basins (Investigated Areas 2-6). These areas are manmade depressions excavated in dry land within non-hydric soils for the purposes of stormwater management, and continue to function in that capacity. In addition, the five detention basins were used

in the past as yard runoff and coal pile settling basins for the now decommissioned coal fired power plant facility (Crawford Generating Station).

In our opinion, Investigated Areas 1 through 6 are manmade features that should be exempt from regulation due to the preamble to 33 Code of Federal Regulations (CFR) Part 328, the U.S. Army Corps of Engineers (Corps) 2015 Final Rule.

### **Federal Regulations**

The preamble to 33 CFR Part 328 states that features excavated from uplands are not considered waters of the United States. For example, a drainage ditch excavated in uplands, and/or located along a roadway, runway, or railroad that only carries water from upland areas, is not considered jurisdictional, even if it supports hydrophytic vegetation. Other common examples of non-jurisdictional areas excavated from uplands include stormwater or other treatment ponds, detention basins, retention ponds, sediment basins, artificial reflecting pools, and golf course ponds.

According to the 2015 Corps Final Rule, issued on June 29, 2015, paragraph (b)(4), the following features are not "waters of the U.S.": artificial, constructed lakes or ponds created by excavating and/or diking dry land such as farm and stock watering ponds, irrigation ponds, settling basins, log cleaning ponds, cooling ponds, or fields flooded for rice growing; and water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water.

In our opinion, per the preamble to 33 CFR Part 328 and the 2015 Corps Final Rule, Investigated Areas 1 through 6 are exempt from federal regulation because they are manmade depressions excavated in dry land within non-hydric soils for the purposes of stormwater management, and continue to function in that capacity.

### **Summary**

On the basis of a fact-specific analysis as detailed above, Investigated Areas 1 through 6 are exempt from federal regulation as they are manmade depressions that were excavated out of uplands for the purposes of stormwater management and they continue to function in that capacity. Therefore, these areas should not be considered waters of the U.S. and should not be regulated under Section 404 of the Clean Water Act. We recommend submitting a request for a Jurisdictional Determination to the USACE to confirm our opinion.

Please contact our office should you have any questions.

Sincerely,



Travis D. Kessler, PWS  
Senior Environmental Resources Specialist

Cc: Tom Kehoe, CPESC - Senior Environmental Resources Specialist

**WETLAND/WATERS ASSESSMENT REPORT  
SPACECO, INC. – CRAWFORD SITE  
CHICAGO, COOK COUNTY, ILLINOIS  
CBBEL Project No. 170268  
June 1, 2017**

**WETLAND ASSESSMENT**

As requested, on May 31, 2017, Christopher B. Burke Engineering, Ltd. (CBBEL) completed a wetland/waters assessment of the study area to determine on-site wetland/waters boundaries. The Chicago Sanitary and Ship Canal and six investigated areas were identified at the time of our field investigation using the U.S. Army Corps of Engineers (USACE) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (August 2010). An aerial photograph depicting the location of the identified areas is included as Exhibit 6. A series of representative photographs are included as Exhibit 7. Information collected from the field investigation is listed in the data forms.

**METHODOLOGY**

The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (August 2010), identifies the mandatory technical criteria for wetland identification. The three essential characteristics of a jurisdictional wetland are hydrophytic vegetation, hydric soils and wetland hydrology as described below:

**Hydrophytic Vegetation:** The hydrophytic vegetation criterion is based on a separation of plants into five basic groups:

- (1) Obligate wetland plants (OBL) almost always occur (estimated probability >99%) in wetlands under natural conditions;
- (2) Facultative wetland plants (FACW) usually occur in wetlands (estimated probability 67-99%), but occasionally are found in non-wetlands;
- (3) Facultative plants (FAC) are equally likely to occur in wetlands or non-wetlands (estimated probability 34-66%);
- (4) Facultative upland plants (FACU) usually occur in non-wetlands (estimated probability 67-99%), but occasionally are found in wetlands; and
- (5) Obligate upland plants (UPL) almost always occur (estimated probability >99%) in non-wetlands under natural conditions.

Four procedures completed in the following order are used to determine if hydrophytic vegetation is present:

- 1) **Rapid Test**: The Rapid Test for hydrophytic vegetation is met if all dominant species across all strata are OBL or FACW, or a combination of the two based on a visual assessment.
- 2) **Dominance Test**: Using the 50/20 Rule, if greater than 50% of the plants present are FAC, FACW, or OBL, the subject area meets the hydrophytic vegetation criterion.
- 3) **Prevalence Index**: Each plant species in a sampling plot is assigned a numeric value (OBL=1; FACW=2; FAC=3; FACU=4; UPL=5). Based on the sampling data, the absolute cover is calculated for each species in each stratum and using the specified formula, if the Prevalence Index is 3 or less, hydrophytic vegetation is present.
- 4) **Morphological Adaptations**: Various species may develop physical characteristics after growing in wetland areas such as multi-stemmed trunks, shallow roots and buttressed stems. Hydrophytic vegetation is present if an adaptation is observed in more than 50% of FACU species growing in an area that contains hydric soil and wetland hydrology.

**Hydric Soils**: Hydric soils are defined in the manual as "soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part." Field indicators of hydric soil are found in the NTCHS Field Indicators of Hydric Soils in the United States (USDA Natural Resources Conservation Service 2006b or current version).

**Wetland Hydrology**: The wetland hydrology criterion is often the most difficult to determine. Typically, the presence of water for a portion of the growing season creates anaerobic conditions. Anaerobic conditions lead to the prevalence of wetland plants. Morphological adaptations of plants, driftlines and watermarks are examples of wetland hydrology field indicators.

## **RESULTS AND DISCUSSION**

### **STUDY AREA**

The study area is located to the southeast of the intersection of West 33<sup>rd</sup> Street and South Pulaski Road (Exhibit 1). The study area consists of a decommissioned abandoned coal-fired power plant, including buildings, asphalt, concrete and compacted gravel surfaces, uplands, the Chicago Sanitary and Ship Canal and six investigated areas (Exhibit 6).

In our opinion, Investigated Areas 1 through 6 are manmade stormwater features that were excavated in dry land within non-hydric soils to aid in stormwater management and continue to function in that capacity. Therefore, in our opinion, the investigated areas should be exempt from federal regulations.

We recommend submitting a Jurisdictional Determination request to the USACE to determine whether the investigated areas will be regulated under Section 404 of the Clean Water Act.

### IDENTIFIED WATERS OF THE U.S.

Waters of the U.S. are defined as the ordinary high water mark in non-tidal waters, provided the jurisdiction is not extended by the presence of wetlands. The term “ordinary high water mark” (OHWM) refers to the line established by the fluctuations of water. These fluctuations can be indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, or the presence of litter and debris.

### Chicago Sanitary and Ship Canal

The Chicago Sanitary and Ship Canal is a navigable waters of the U.S. that runs in an east-west direction along the south boundary of the study area (Exhibit 6). Dominant vegetation included within the riparian zone of the study area consisted of eastern cottonwood (*Populus deltoides*), common buckthorn (*Rhamnus cathartica*), smooth sumac (*Rhus glabra*), common reed (*Phragmites australis*), bull thistle (*Cirsium vulgare*) and riverbank grape (*Vitis riparia*).

The ordinary high water mark was determined by a defined scour line along the bank of the river, a wrack line, and water marks on existing trees and along areas that contained a sheet pile wall. Site topography surrounding the riparian areas along the river was steep, with areas of the bank being vertical where existing sheet pile armoring existed.

The upland areas to the north of the riparian zone of the river were dominated by mugwort (*Artemisia vulgaris*), sweet white clover (*Melilotus alba*) tall goldenrod (*Solidago altissima*) and Queen Anne’s lace (*Daucus carota*). The site contained old commercial buildings, a combination of asphalt and concrete impervious surfaces, compacted gravel, and scattered grasses and weeds. Site topography was generally flat with undulations within existing fills areas or manmade depressions that contain stormwater runoff.

### INVESTIGATED AREAS DESCRIPTION

The following is a brief description of the investigated areas with a list of the dominant plant species observed and their corresponding wetland indicator categories. A coefficient of conservatism (C-value) is also included for each plant species. C-values were established by Swink and Wilhelm (1999) to quantify a wetland’s native attribute for comparative purposes.

Each plant species is rated on a scale of 0 to 10, 0-representing non-native or noxious species commonly found in a variety of habitats, and 10 representing plants found only under specific ecological conditions. The C-values of plants found in wetland areas can give some insight as to the overall quality or value of the wetland. Wetlands containing

an abundance of plants with a low C-value suggest that these wetlands have been disturbed in the past. Wetlands containing an abundance of plants with a high C-value suggest that specific ecological conditions necessary for their survival are intact thus disturbance is probably minimal and the wetland maintains at least some of its original integrity.

### **Investigated Area 1**

Investigated Area 1, characterized at data point 1A, was identified in the southeast portion of the study area. The area consists of two drainage swales containing primarily facultative wetland and obligate wetland plant species. Dominant vegetation within the drainage swales consisted of common reed (*Phragmites australis*), narrow-leaved cattail (*Typha angustifolia*) and marsh spike rush (*Eleocharis obtusa*). The presence of these species meets the hydrophytic vegetation criteria.

Positive wetland hydrology was indicated by a presence of saturation, geomorphic position, and FAC-neutral test. Soils within the investigated area were mapped as Urban Land, which is classified as a non-hydric soil. Observed soil profiles indicated the presence of compacted gravel fill material, which indicated evidence of historic excavation and filling practices.

In our opinion, Investigated Area 1 should be considered to be exempt from federal regulations because it consists of two manmade drainage swales that were excavated in dry land within non-hydric soils to aid in stormwater management and they continue to function in that capacity.

The following plant list was collected within the investigated area:

FLORISTIC QUALITY DATA			Native	5	100.0%	Adventive	0	0.0%
5	NATIVE SPECIES		Tree	0	0.0%	Tree	0	0.0%
5	Total Species		Shrub	0	0.0%	Shrub	0	0.0%
2.8	NATIVE MEAN C		W-Vine	0	0.0%	W-Vine	0	0.0%
2.8	W/Adventives		H-Vine	0	0.0%	H-Vine	0	0.0%
6.3	NATIVE FQI		P-Forb	2	40.0%	P-Forb	0	0.0%
6.3	W/Adventives		B-Forb	0	0.0%	B-Forb	0	0.0%
-3.0	NATIVE MEAN W		A-Forb	0	0.0%	A-Forb	0	0.0%
-3.0	W/Adventives		P-Grass	2	40.0%	P-Grass	0	0.0%
AVG: Fac. Wetland			A-Grass	0	0.0%	A-Grass	0	0.0%
			P-Sedge	0	0.0%	P-Sedge	0	0.0%
			A-Sedge	1	20.0%	A-Sedge	0	0.0%
			Cryptogam	0	0.0%			
ACRONYM	C SCIENTIFIC NAME		W WETNESS	PHYSIOGNOMY	COMMON NAME			
ELEOBT	3 Eleocharis obtusa		-5 OBL	Nt A-Sedge	BLUNT SPIKE RUSH			
JUNDUD	4 Juncus dudleyi		0 [FAC]	Nt P-Forb	DUDLEY'S RUSH			
PANVIR	5 Panicum virgatum		-1 FAC+	Nt P-Grass	SWITCH GRASS			
PHRAUS	1 Phragmites australis		-4 FACW+	Nt P-Grass	COMMON REED			
TYPANG	1 Typha angustifolia		-5 OBL	Nt P-Forb	NARROW-LEAVED CATTAIL			

### **Investigated Area 2**

Investigated Area 2, characterized at data point 2A, was identified in the southeast portion of the study area to the north of Investigated Area 1. The area consists of a manmade detention basin with a vegetated interior containing primarily facultative and facultative upland plant species. Dominant vegetation within the detention basin

consisted of tall goldenrod (*Solidago altissima*), Kentucky bluegrass (*Poa pratensis*) and tall fescue (*Festuca elatior*). The presence of these species does not meet the hydrophytic vegetation criteria of a wetland.

Positive wetland hydrology was indicated by a presence of saturation and geomorphic position. Soils within the investigated area were mapped as Urban Land, which is classified as a non-hydric soil. Soil profiles were not observed due to a chain link fence restricting access to the interior of the detention basin. However, soils were assumed to be non-hydric based evidence of rock riprap observed along the bottom of the basin.

In our opinion, Investigated Area 2 should be considered to be exempt from federal regulations because it is a manmade detention basin that was excavated in dry land within non-hydric soils to aid in stormwater management and continues to function in that capacity.

The following plant list was collected within the investigated area:

FLORISTIC QUALITY DATA			Native	3	27.3%	Adventive	8	72.7%
3 NATIVE SPECIES			Tree	1	9.1%	Tree	0	0.0%
11 Total Species			Shrub	0	0.0%	Shrub	1	9.1%
0.7 NATIVE MEAN C			W-Vine	0	0.0%	W-Vine	0	0.0%
0.2 W/Adventives			H-Vine	0	0.0%	H-Vine	0	0.0%
1.2 NATIVE FQI			P-Forb	1	9.1%	P-Forb	3	27.3%
0.6 W/Adventives			B-Forb	0	0.0%	B-Forb	2	18.2%
-1.3 NATIVE MEAN W			A-Forb	0	0.0%	A-Forb	0	0.0%
1.4 W/Adventives			P-Grass	1	9.1%	P-Grass	2	18.2%
AVG: Faculative (+)			A-Grass	0	0.0%	A-Grass	0	0.0%
			P-Sedge	0	0.0%	P-Sedge	0	0.0%
			A-Sedge	0	0.0%	A-Sedge	0	0.0%
			Cryptogam	0	0.0%			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAI	0	Acer saccharinum	-3	FACW	Nt Tree	SILVER MAPLE
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad B-Forb	QUEEN ANNE'S LACE
ELAANG	0	ELAEAGNUS ANGUSTIFOLIA	4	FACU-	Ad Shrub	RUSSIAN OLIVE
FESELA	0	FESTUCA ELATIOR	2	FACU+	Ad P-Grass	TALL FESCUE
MELALB	0	MELILOTUS ALBA	3	FACU	Ad B-Forb	WHITE SWEET CLOVER
PHRAUS	1	Phragmites australis	-4	FACW+	Nt P-Grass	COMMON REED
PLALAN	0	PLANTAGO LANCEOLATA	0	FAC	Ad P-Forb	ENGLISH PLANTAIN
PLAMAJ	0	PLANTAGO MAJOR	-1	FAC+	Ad P-Forb	COMMON PLANTAIN
POAPRA	0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
TRIPRA	0	TRIFOLIUM PRATENSE	5	UPL	Ad P-Forb	RED CLOVER

### Investigated Area 3

Investigated Area 3, characterized at data point 3A, was identified in the south portion of the study area. The area consists of a detention basin with a vegetated interior containing primarily obligate wetland plant species. Dominant vegetation within the manmade depression consisted of narrow-leaved cattail. The presence of this species meets the hydrophytic vegetation criteria.

Positive wetland hydrology was indicated by a presence of surface water, high water table, saturation, geomorphic position, and FAC-neutral test. Soils within the investigated area were mapped as Urban Land, which is classified as a non-hydric soil. Soil profiles consisted of gravel fill material. Therefore, soils were assumed to be non-hydric.

In our opinion, Investigated Area 3 should be considered to be exempt from federal regulations because it is a manmade detention basin that was excavated in dry land within non-hydric soils to aid in stormwater management and continues to function in that capacity.

The following plant list was collected within the investigated area:

FLORISTIC QUALITY DATA			Native	5	100.0%	Adventive	0	0.0%
5	NATIVE SPECIES		Tree	1	20.0%	Tree	0	0.0%
5	Total Species		Shrub	0	0.0%	Shrub	0	0.0%
2.6	NATIVE MEAN C		W-Vine	0	0.0%	W-Vine	0	0.0%
2.6	W/Adventives		H-Vine	0	0.0%	H-Vine	0	0.0%
5.8	NATIVE FQI		P-Forb	1	20.0%	P-Forb	0	0.0%
5.8	W/Adventives		B-Forb	0	0.0%	B-Forb	0	0.0%
-4.0	NATIVE MEAN W		A-Forb	0	0.0%	A-Forb	0	0.0%
-4.0	W/Adventives		P-Grass	1	20.0%	P-Grass	0	0.0%
AVG: Fac. Wetland (+)			A-Grass	0	0.0%	A-Grass	0	0.0%
			P-Sedge	2	40.0%	P-Sedge	0	0.0%
			A-Sedge	0	0.0%	A-Sedge	0	0.0%
			Cryptogam	0	0.0%			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
PHRAUS	1	Phragmites australis	-4	FACW+	Nt P-Grass	COMMON REED
POPDEL	2	Populus deltoides	-1	FAC+	Nt Tree	EASTERN COTTONWOOD
SCIATR	4	Scirpus atrovirens	-5	OBL	Nt P-Sedge	DARK GREEN RUSH
SCIVAC	5	Scirpus validus creber	-5	OBL	Nt P-Sedge	GREAT BULRUSH
TYPANG	1	Typha angustifolia	-5	OBL	Nt P-Forb	NARROW-LEAVED CATTAIL

## Investigated Area 4

Investigated Area 4, characterized at data point 4A, was identified in the south portion of the study area to the north of Investigated Area 3. The area consists of a detention basin with a vegetated interior containing primarily facultative wetland plant species. Dominant vegetation within the manmade depression consisted of common reed. The presence of this species meets the hydrophytic vegetation criteria.

Positive wetland hydrology was indicated by a presence of surface water, high water table, saturation, geomorphic position, and FAC-neutral test. Soils within the investigated area were mapped as Urban Land which is classified as a non-hydric soil. Soil profiles were not observed due to gravel fill material that existed within the bottom of the detention basin. Therefore, soils were assumed to be non-hydric.

In our opinion, Investigated Area 4 should be considered to be exempt from federal regulations because it is a manmade detention basin that was excavated in dry land within non-hydric soils to aid in stormwater management and continues to function in that capacity.

The following plant list was collected within the investigated area:

FLORISTIC QUALITY DATA			Native	1	100.0%	Adventive	0	0.0%
1	NATIVE SPECIES		Tree	0	0.0%	Tree	0	0.0%
1	Total Species		Shrub	0	0.0%	Shrub	0	0.0%
1.0	NATIVE MEAN C		W-Vine	0	0.0%	W-Vine	0	0.0%
1.0	W/Adventives		H-Vine	0	0.0%	H-Vine	0	0.0%
1.0	NATIVE FQI		P-Forb	0	0.0%	P-Forb	0	0.0%
1.0	W/Adventives		B-Forb	0	0.0%	B-Forb	0	0.0%
-4.0	NATIVE MEAN W		A-Forb	0	0.0%	A-Forb	0	0.0%
-4.0	W/Adventives		P-Grass	1	100.0%	P-Grass	0	0.0%
AVG: Fac. Wetland (+)			A-Grass	0	0.0%	A-Grass	0	0.0%
			P-Sedge	0	0.0%	P-Sedge	0	0.0%



		A-Sedge	0	0.0%	A-Sedge	0	0.0%
		Cryptogam	0	0.0%			
ACRONYM	C SCIENTIFIC NAME				W WETNESS	PHYSIOGNOMY	COMMON NAME
PHRAUS	1 Phragmites australis				-4 FACW+	Nt P-Grass	COMMON REED

## **Investigated Area 5**

Investigated Area 5, characterized at data point 5A, was identified in the north portion of the study area. The area consists of a manmade depression with a drainage ditch running along its south and west boundaries. The area consisted of a vegetated interior containing primarily facultative wetland plant species. Dominant vegetation within the manmade depression consisted of common reed. The presence of this species meets the hydrophytic vegetation criteria.

Positive wetland hydrology was indicated by a presence of surface water, high water table, saturation, geomorphic position, and FAC-neutral test. Soils within the investigated area were mapped as Urban Land, which is classified as a non-hydric soil. Soil profiles consisted of coal ash from the prior site use as a coal-fired power plant. Therefore, soils were assumed to be non-hydric.

In our opinion, Investigated Area 5 should be considered to be exempt from federal regulations because it is a manmade depression that was excavated in dry land within non-hydric soils to aid in stormwater management and continues to function in that capacity.

The following plant list was collected within the investigated area:

FLORISTIC QUALITY DATA	Native	4	100.0%	Adventive	0	0.0%
4 NATIVE SPECIES	Tree	0	0.0%	Tree	0	0.0%
4 Total Species	Shrub	0	0.0%	Shrub	0	0.0%
2.8 NATIVE MEAN C	W-Vine	0	0.0%	W-Vine	0	0.0%
2.8 W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
5.5 NATIVE FQI	P-Forb	1	25.0%	P-Forb	0	0.0%
5.5 W/Adventives	B-Forb	0	0.0%	B-Forb	0	0.0%
-4.7 NATIVE MEAN W	A-Forb	0	0.0%	A-Forb	0	0.0%
-4.7 W/Adventives	P-Grass	1	25.0%	P-Grass	0	0.0%
AVG: Obl. Wetland	A-Grass	0	0.0%	A-Grass	0	0.0%
	P-Sedge	2	50.0%	P-Sedge	0	0.0%
	A-Sedge	0	0.0%	A-Sedge	0	0.0%
	Cryptogam	0	0.0%			
ACRONYM	C SCIENTIFIC NAME			W WETNESS	PHYSIOGNOMY	COMMON NAME
PHRAUS	1 Phragmites australis			-4 FACW+	Nt P-Grass	COMMON REED
SCIATR	4 Scirpus atrovirens			-5 OBL	Nt P-Sedge	DARK GREEN RUSH
SCIVAC	5 Scirpus validus creber			-5 OBL	Nt P-Sedge	GREAT BULRUSH
TYPANG	1 Typha angustifolia			-5 OBL	Nt P-Forb	NARROW-LEAVED CATTAIL

## **Investigated Area 6**

Investigated Area 6, characterized at data point 6A, was identified in the northwest portion of the study area. The area consists of a detention basin with an open water interior that is partially vegetated with primarily obligate wetland plant species. Dominant vegetation within the detention basin consisted of narrow-leaved cattail. The presence of this species meets the hydrophytic vegetation criteria.

Positive wetland hydrology was indicated by a presence of surface water, high water table, saturation, geomorphic position, and FAC-neutral test. Soils within the investigated area were mapped as Urban Land, which is classified as a non-hydric soil. Soil profiles were not observed due a rubber liner that existed within the detention basin. Therefore, soils were assumed to be non-hydric.

In our opinion, Investigated Area 6 should be considered to be exempt from federal regulations because it is a manmade detention basin that was excavated in dry land within non-hydric soils to aid in stormwater management and continues to function in that capacity.

The following plant list was collected within the investigated area:

FLORISTIC QUALITY DATA		Native	6	100.0%	Adventive	0	0.0%
6	NATIVE SPECIES	Tree	3	50.0%	Tree	0	0.0%
6	Total Species	Shrub	0	0.0%	Shrub	0	0.0%
1.0	NATIVE MEAN C	W-Vine	1	16.7%	W-Vine	0	0.0%
1.0	W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
2.4	NATIVE FQI	P-Forb	1	16.7%	P-Forb	0	0.0%
2.4	W/Adventives	B-Forb	0	0.0%	B-Forb	0	0.0%
-2.8	NATIVE MEAN W	A-Forb	0	0.0%	A-Forb	0	0.0%
-2.8	W/Adventives	P-Grass	1	16.7%	P-Grass	0	0.0%
AVG:	Fac. Wetland	A-Grass	0	0.0%	A-Grass	0	0.0%
		P-Sedge	0	0.0%	P-Sedge	0	0.0%
		A-Sedge	0	0.0%	A-Sedge	0	0.0%
		Cryptogam	0	0.0%			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACENEG	0	Acer negundo	-2	FACW-	Nt Tree	BOX ELDER
ACESAI	0	Acer saccharinum	-3	FACW	Nt Tree	SILVER MAPLE
PHRAUS	1	Phragmites australis	-4	FACW+	Nt P-Grass	COMMON REED
POPDEL	2	Populus deltoides	-1	FAC+	Nt Tree	EASTERN COTTONWOOD
TYPANG	1	Typha angustifolia	-5	OBL	Nt P-Forb	NARROW-LEAVED CATTAIL
VITRIP	2	Vitis riparia	-2	FACW-	Nt W-Vine	RIVERBANK GRAPE

## REFERENCE MATERIALS

The following reference materials were reviewed and used to assist in the wetland field reconnaissance. They are included as Exhibits 1-5.

## LOCATION MAP

The study area is located southeast of the intersection of West 33<sup>rd</sup> Street and South Pulaski Road in Chicago, Cook County, Illinois (Exhibit 1). Geographically, the study area is located in Section 35, Township 39 North, and Range 13 East of the Third Principal Meridian (41.830182°N; -87.721523°W).

## NATIONAL WETLAND INVENTORY

The National Wetland Inventory (NWI), Englewood Quadrangle (1983), indicates wetlands are mapped within the study area (Exhibit 2). The NWI serves only as a large-scale guide and actual wetland locations and types often vary from that mapped. The following wetland types are mapped within the study area:

PUBHx                      -                      Palustrine, unconsolidated bottom, permanently flooded, excavated

- |        |   |   |
|--------|---|---|
| PUBK   | - | Palustrine, unconsolidated bottom, artificially flooded                             |
| R2UBHx | - | Riverine, lower perennial, unconsolidated bottom,<br>permanently flooded, excavated |

### SOIL SURVEY

The Soil Survey of Cook County, Illinois (2001) was reviewed to determine the location of hydric soils within the study area (Exhibit 3). The following soil type is mapped within the study area:

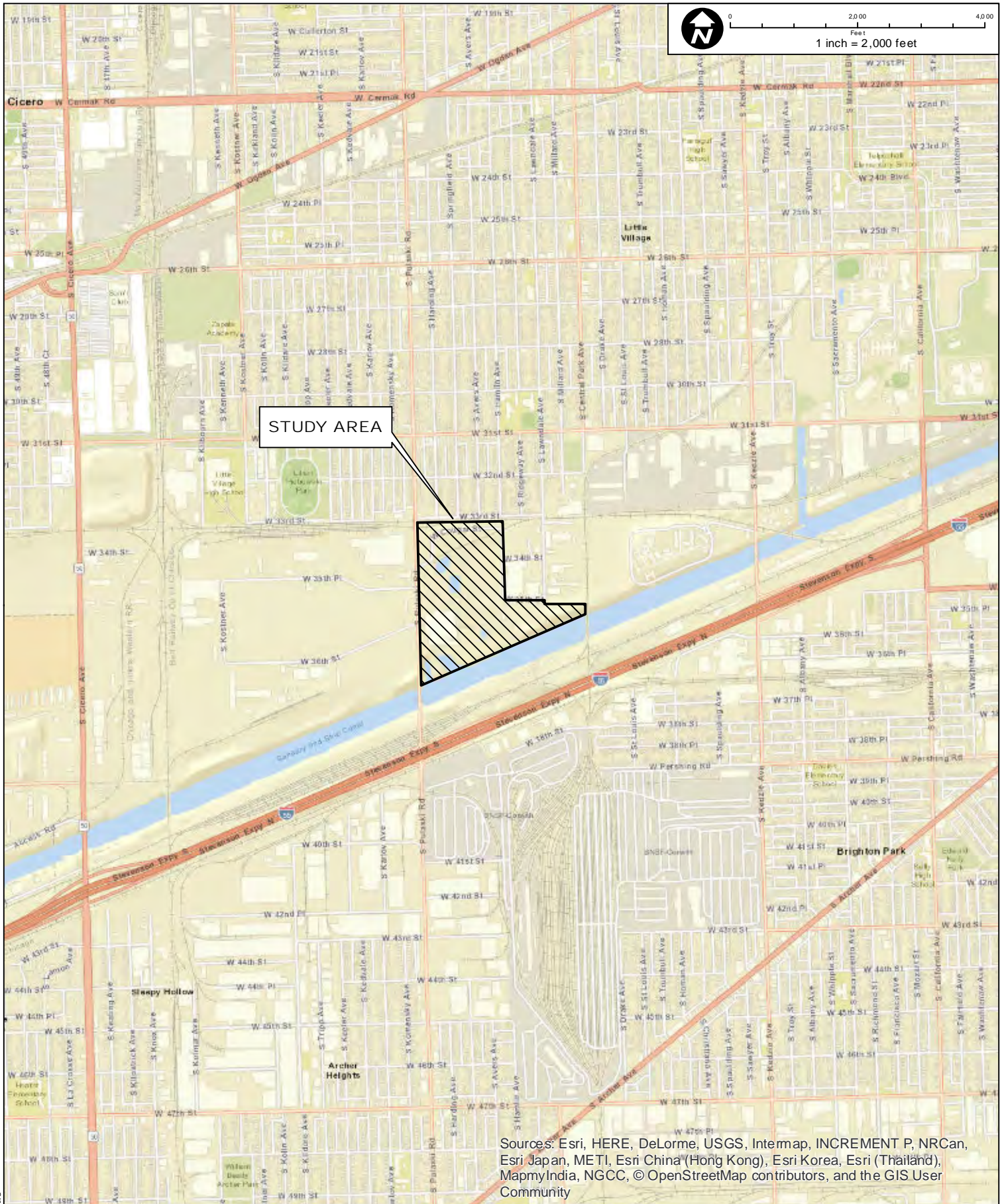
- |      |   |                               |
|------|---|-------------------------------|
| 533  | - | Urban land                    |
| 802A | - | Orthents, loamy, nearly level |
| 805B | - | Orthents, clayey, undulating  |

### UNITED STATES GEOLOGICAL SURVEY



The United States Geological Survey (USGS), Englewood Quadrangle (1993) was reviewed to determine historic local drainage patterns (Exhibit 4). The USGS map indicates that site runoff flows south into the Chicago Sanitary and Ship Canal.

### FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map (FIRM) for Cook County and Incorporated Areas, Illinois, Map Number 17031C0504 J, effective August 19, 2008, was reviewed to determine the location of regulatory floodplain within the study area (Exhibit 5). The presence of floodplain can be indicative of wetland hydrology. The FIRM indicates 100-year regulatory floodplain is mapped within the Chicago Sanitary and Ship Canal.



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

CLIENT:				TITLE:				LOCATION MAP				CBBEL # 17-0268	
												DATE: 5/31/17	
		CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 · Rosemont, Illinois 60018 · (847) 823-0500				DWN. KEK		SCALE: 1" = 2,000'		EXH 1			
						CHKD. TJK		PLOT DATE: 6/1/2017					
						FILE NAME: 170268_LOC							



NOTE: TAKEN FROM THE NATIONAL WETLAND INVENTORY (NWI), ENGLEWOOD QUADRANGLE(1983)



0 400 800  
Feet  
1 inch = 400 feet

LEGEND

PUBHx - PALUSTRINE, UNCONSOLIDATED BOTTOM, PERMANENTLY FLOODED, EXCAVATED  
PUBK - PALUSTRINE, UNCONSOLIDATED BOTTOM, ARTIFICIALLY FLOODED  
R2UBHx - RIVERINE, LOWER PERENNIAL, UNCONSOLIDATED BOTTOM, PERMANENTLY FLOODED, EXCAVATED



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CLIENT:



TITLE:

NATIONAL  
WETLAND INVENTORY

CBBEL # 17-0268

DATE: 5/31/17

EXH 2



**CHRISTOPHER B. BURKE ENGINEERING, LTD.**  
9575 W. Higgins Road, Suite 600 · Rosemont, Illinois 60018 · (847) 823-0500

DWN.	KEK	SCALE:	1" = 400'
CHKD.	TJK	PLOT DATE:	5/31/2017
FILE NAME:	170268_NWI		



NOTE: TAKEN FROM THE SOIL SURVEY OF COOK COUNTY, ILLINOIS(2001)



0 400 800  
Feet  
1 inch = 400 feet

LEGEND

W - WATER  
533 - URBAN LAND  
802A - ORTHENTS, LOAMY, NEARLY LEVEL  
805B - ORTHENTS, CLAYEY, UNDULATING



Copyright nearmap 2015

CLIENT:



TITLE:

SOIL SURVEY

CBBEL # 17-0268

DATE: 5/31/17

EXH 3



**CHRISTOPHER B. BURKE ENGINEERING, LTD.**  
9575 W. Higgins Road, Suite 600 · Rosemont, Illinois 60018 · (847) 823-0500

DWN.	KEK	SCALE:	1" = 400'
CHKD.	TJK	PLOT DATE:	5/31/2017
FILE NAME:	170268_SOILS		



Feet  
1 inch = 2,000 feet



DWN.	KEK		SCALE:	1" = 2,000
CHKD.	TJK		PLOT DATE:	6/1/2017
FILE NAME:	170268_USGS			



NOTE: TAKEN FROM THE FLOOD INSURANCE RATE MAP(FIRM), COOK COUNTY AND INCORPORATED AREAS, ILLINOIS, MAP NUMBER 17031C0504J, EFFECTIVE DATE: AUGUST 19, 2008



0 400 800  
Feet  
1 inch = 400 feet

### Legend

100 YEAR FLOODPLAIN



Copyright nea map 2015

CLIENT:



TITLE:

## FLOOD INSURANCE RATE MAP

CBBEL # 17-0268

DATE: 5/31/17



**CHRISTOPHER B. BURKE ENGINEERING, LTD.**  
9575 W. Higgins Road, Suite 600 · Rosemont, Illinois 60018 · (847) 823-0500

DWN.	KEK	SCALE:	1" = 400'
CHKD.	TJK	PLOT DATE:	5/31/2017
FILE NAME:	170268_FIRM		

EXH 5





**Legend**

- INVESTIGATED AREAS
- CHICAGO SANITARY AND SHIP CANAL



CLIENT:



TITLE:

**APPROXIMATE  
WETLAND DELINEATION**

CBBEL # 17-0268

DATE: 5/31/17

**EXH 6**



**CHRISTOPHER B. BURKE ENGINEERING, LTD.**  
9575 W. Higgins Road, Suite 600 · Rosemont, Illinois 60018 · (847) 823-0500

DWN.	KEK	SCALE:	1" = 400'
CHKD.	TJK	PLOT DATE:	6/2/2017
FILE NAME:	170268_AWD		





Chicago Sanitary and Ship Canal – Facing northwest



Chicago Sanitary and Ship Canal – Facing north



Investigated Area 1 – Facing west



Investigated Area 2 – Facing west



**Christopher B. Burke Engineering, Ltd.**  
**9575 W. Higgins Road, Suite 600**  
**Rosemont, Illinois 60018**  
**847-823-0500**

**CLIENT: SPACECO, Inc.**

**PROJECT NO.:170268**

**5/31/17**

**Crawford Site, Chicago, Cook County, Illinois**

**EXHIBIT: 7A**





Investigated Area 3 – Facing southwest



Investigated Area 4 – Facing south



Investigated Area 5 – Facing southwest



Investigated Area 6 – Facing west



**Christopher B. Burke Engineering, Ltd.**  
**9575 W. Higgins Road, Suite 600**  
**Rosemont, Illinois 60018**  
**847-823-0500**

**CLIENT: SPACECO, Inc.**

**PROJECT NO.:170268**

**5/31/17**

**Crawford Site, Chicago, Cook County, Illinois**

**EXHIBIT: 7B**

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 1A  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed?

Are "normal circumstances"

Are vegetation           , soil           , or hydrology            naturally problematic?

present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 1</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>Y</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u> = Total Cover			<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>60</u> x 1 = <u>60</u> FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>100</u> (A) <u>140</u> (B) Prevalence Index = B/A = <u>1.40</u>
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				
1					
2					
3					
4					
5					
		<u>0</u> = Total Cover			
Herb stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* <u>      </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Phragmites australis</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2	<u>Typha angustifolia</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
3	<u>Eleocharis obtusa</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
4					
5					
6					
7					
8					
9					
10					
		<u>100</u> = Total Cover			
Woody vine stratum	(Plot size: <u>30'</u> )				<b>Hydrophytic vegetation present?</b> <u>Y</u>
1					
2					
		<u>0</u> = Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)

## SOIL

Sampling Point: 1A

## Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-8							gravel fill	Soils are mixed with gravel fill
8+							compacted fill	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

## Hydric Soil Indicators:

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

## Indicators for Problematic Hydric Soils:

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

## Restrictive Layer (if observed):

 Type: Rock  
 Depth (inches): 8

Hydric soil present? N

## Remarks:

Rock fill was encountered at 8 inches in the soil profile.

## HYDROLOGY

## Wetland Hydrology Indicators:

## Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

## Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)       |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |

## Field Observations:

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Saturation present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): surface

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 1B  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed?

Are "normal circumstances"

Are vegetation           , soil           , or hydrology            naturally problematic?

present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	<b>Is the sampled area within a wetland?</b> <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 1</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>N</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>25.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>85</u> x 4 = <u>340</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>115</u> (A) <u>410</u> (B) Prevalence Index = B/A = <u>3.57</u>
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				
1	<u>Elaeagnus angustifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2					
3					
4					
5					
		<u>20</u>	= Total Cover		
Herb stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> Rapid test for hydrophytic vegetation <u>      </u> Dominance test is >50% <u>      </u> Prevalence index is ≤3.0* <u>      </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic hydrophytic vegetation* (explain) <u>      </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Festuca arundinacea</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Phalaris arundinacea</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3	<u>Solidago altissima</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4	<u>Plantago lanceolata</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
5	<u>Plantago major</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6					
7					
8					
9					
10					
		<u>95</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30'</u> )				<b>Hydrophytic vegetation present?</b> <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

## SOIL

Sampling Point: 1B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-2	10YR 3/3	100					silt loam mixed with fill	Soils are mixed with gravel fill
2+							Gravel fill	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

**Hydric Soil Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

**Indicators for Problematic Hydric Soils:**

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if observed):**
 Type: Gravel fill  
 Depth (inches):

Hydric soil present? N

## Remarks:

Gravel fill was encountered at 2 inches in the soil profile.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

- |  |
|--|
| <input type="checkbox"/> Surface Water (A1)                        |
| <input type="checkbox"/> High Water Table (A2)                     |
| <input type="checkbox"/> Saturation (A3)                           |
| <input type="checkbox"/> Water Marks (B1)                          |
| <input type="checkbox"/> Sediment Deposits (B2)                    |
| <input type="checkbox"/> Drift Deposits (B3)                       |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   |
| <input type="checkbox"/> Iron Deposits (B5)                        |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |

- |   |
|---|
| <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Other (Explain in Remarks)                 |

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

**Field Observations:**

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>

 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 2A  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed?

Are "normal circumstances"

Are vegetation           , soil           , or hydrology            naturally problematic?

present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 2</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>33.33%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>30</u> x 3 = <u>90</u> FACU species <u>70</u> x 4 = <u>280</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>100</u> (A) <u>370</u> (B) Prevalence Index = B/A = <u>3.70</u>
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5'</u> )				
1	<u>Solidago altissima</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Poa pratensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3	<u>Festuca arundinacea</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4	<u>Melilotus officinalis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5	<u>Plantago lanceolata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
6	<u>Plantago Major</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
7	<u>Trifolium pratense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
8					
9					
10					
		<u>100</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30'</u> )				
1					
2					
		<u>0</u>	= Total Cover		

## Hydrophytic Vegetation Indicators:

       Rapid test for hydrophytic vegetation

       Dominance test is >50%

       Prevalence index is ≤3.0\*

       Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

       Problematic hydrophytic vegetation\* (explain)

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic vegetation present?** N

Remarks: (Include photo numbers here or on a separate sheet)



## SOIL

Sampling Point: 2A

## Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0+							Rock	Soils are mixed with rock

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

## Hydric Soil Indicators:

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

## Indicators for Problematic Hydric Soils:

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

## Restrictive Layer (if observed):

 Type: Rock  
 Depth (inches): 0+

Hydric soil present? N

## Remarks:

Rock fill was encountered at the surface of the soil profile.

## HYDROLOGY

## Wetland Hydrology Indicators:

## Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

## Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)       |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

## Field Observations:

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	surface

 (includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 2B  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed?

Are "normal circumstances"

Are vegetation           , soil           , or hydrology            naturally problematic?

present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	<b>Is the sampled area within a wetland?</b> <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 2</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>N</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>25.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>30</u> x 3 = <u>90</u> FACU species <u>90</u> x 4 = <u>360</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>120</u> (A) <u>450</u> (B) Prevalence Index = B/A = <u>3.75</u>
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				
1	<u>Elaeagnus angustifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2					
3					
4					
5					
		<u>20</u>	= Total Cover		
Herb stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> Rapid test for hydrophytic vegetation <u>      </u> Dominance test is >50% <u>      </u> Prevalence index is ≤3.0* <u>      </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Festuca arundinacea</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Poa pratensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3	<u>Solidago altissima</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4	<u>Plantago lanceolata</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
5	<u>Plantago major</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6	<u>Melilotus officinalis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
7					
8					
9					
10					
		<u>100</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30'</u> )				<b>Hydrophytic vegetation present?</b> <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

## SOIL

Sampling Point: 2B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-2	10YR 3/3	100					silt loam mixed with fill	Soils are mixed with gravel fill
2+							Gravel fill	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

## Hydric Soil Indicators:

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

## Indicators for Problematic Hydric Soils:

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

## Restrictive Layer (if observed):

 Type: Gravel fill  
 Depth (inches): 2+

Hydric soil present? N

## Remarks:

Gravel fill was encountered at 2 inches in the soil profile.

## HYDROLOGY

## Wetland Hydrology Indicators:

## Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

## Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

## Field Observations:

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Saturation present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 3A  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed?

Are "normal circumstances"

Are vegetation           , soil           , or hydrology            naturally problematic?

present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 3</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>Y</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>85</u> x 1 = <u>85</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>95</u> (A) <u>110</u> (B) Prevalence Index = B/A = <u>1.16</u>
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* <u>      </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Typha angustifolia</u>	<u>75</u>	<u>Y</u>	<u>OBL</u>	
2	<u>Phragmites australis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
3	<u>Populus deltoides</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4	<u>Scirpus atrovirens</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
5	<u>Schoenoplectus tabernaemontani</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6					
7					
8					
9					
10					
		<u>95</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30'</u> )				<b>Hydrophytic vegetation present?</b> <u>Y</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

## SOIL

Sampling Point: 3A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0+							Rock	Soils are mixed with rock

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

**Hydric Soil Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

**Indicators for Problematic Hydric Soils:**

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if observed):**
 Type: Rock  
 Depth (inches): 0+

Hydric soil present? N

## Remarks:

Rock fill was encountered at the surface of the soil profile.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1)             | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)       |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |

**Field Observations:**

Surface water present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	surface

 (includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 3B  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed? Are "normal circumstances"           

Are vegetation           , soil           , or hydrology            naturally problematic? present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	<b>Is the sampled area within a wetland?</b> <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 3</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>100</u> x 4 = <u>400</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>120</u> (A) <u>440</u> (B) Prevalence Index = B/A = <u>3.67</u>
1	<u>Elaeagnus angustifolia</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2					
3					
4					
5					
		<u>20</u>	= Total Cover		
Herb stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> Rapid test for hydrophytic vegetation <u>      </u> Dominance test is >50% <u>      </u> Prevalence index is ≤3.0* <u>      </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Melilotus officinalis</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Solidago altissima</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3	<u>Phalaris arundinacea</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4	<u>Phragmites australis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5	<u>Plantago lanceolata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
6					
7					
8					
9					
10					
		<u>100</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30'</u> )				<b>Hydrophytic vegetation present?</b> <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

## SOIL

Sampling Point: 3B

## Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0+							Rock	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

## Hydric Soil Indicators:

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

## Indicators for Problematic Hydric Soils:

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

## Restrictive Layer (if observed):

 Type: Rock fill  
 Depth (inches): 0+

Hydric soil present? N

## Remarks:

Rock fill was encountered at the surface.

## HYDROLOGY

## Wetland Hydrology Indicators:

## Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

## Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

## Field Observations:

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Saturation present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>

 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 4A  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed?

Are "normal circumstances"

Are vegetation           , soil           , or hydrology            naturally problematic?

present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 4</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u> = Total Cover			<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>100</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>2.00</u>
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				
1					
2					
3					
4					
5					
		<u>0</u> = Total Cover			
Herb stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Phragmites australis</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>100</u> = Total Cover			
Woody vine stratum	(Plot size: <u>30'</u> )				<b>Hydrophytic vegetation present?</b> <u>Y</u>
1					
2					
		<u>0</u> = Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)



## SOIL

Sampling Point: 4A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0+							Rock	Soils are mixed with rock

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

**Hydric Soil Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

**Indicators for Problematic Hydric Soils:**

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if observed):**
 Type: Rock  
 Depth (inches): 0+

Hydric soil present? N

## Remarks:

Rock fill was encountered at the surface of the soil profile.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1)             | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)       |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |

**Field Observations:**

Surface water present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	surface

 (includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 4B  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed?

Are "normal circumstances"

Are vegetation           , soil           , or hydrology            naturally problematic?

present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	<b>Is the sampled area within a wetland?</b> <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 4</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = <u>          </u>
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> Rapid test for hydrophytic vegetation <u>      </u> Dominance test is >50% <u>      </u> Prevalence index is ≤3.0* <u>      </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic hydrophytic vegetation* (explain) <u>      </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>0</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30'</u> )				<b>Hydrophytic vegetation present?</b> <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

Sample point exists on bare ground.

## SOIL

Sampling Point: 4B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0+							Rock	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

**Hydric Soil Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

**Indicators for Problematic Hydric Soils:**

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if observed):**
 Type: Rock fill  
 Depth (inches): 0+

Hydric soil present? N

## Remarks:

Rock fill was encountered at the surface.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

**Field Observations:**

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Saturation present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>

 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 5A  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed?

Are "normal circumstances"

Are vegetation           , soil           , or hydrology            naturally problematic?

present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 5</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>Y</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u> = Total Cover			<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>75</u> x 2 = <u>150</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>90</u> (A) <u>165</u> (B) Prevalence Index = B/A = <u>1.83</u>
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				
1					
2					
3					
4					
5					
		<u>0</u> = Total Cover			
Herb stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* <u>      </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Phragmites australis</u>	<u>75</u>	<u>Y</u>	<u>FACW</u>	
2	<u>Typha angustifolia</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
3	<u>Scirpus atrovirens</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
4					
5					
6					
7					
8					
9					
10					
		<u>90</u> = Total Cover			
Woody vine stratum	(Plot size: <u>30'</u> )				<b>Hydrophytic vegetation present?</b> <u>Y</u>
1					
2					
		<u>0</u> = Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)

## SOIL

Sampling Point: 5A

## Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0+							Rock	Soils are mixed with rock

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

## Hydric Soil Indicators:

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

## Indicators for Problematic Hydric Soils:

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

## Restrictive Layer (if observed):

 Type: Rock  
 Depth (inches): 0+

Hydric soil present? N

## Remarks:

Rock fill was encountered at the surface of the soil profile.

## HYDROLOGY

## Wetland Hydrology Indicators:

## Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1)             | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

## Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)       |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |

## Field Observations:

Surface water present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	surface

 (includes capillary fringe)

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 5B  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed? Are "normal circumstances"           

Are vegetation           , soil           , or hydrology            naturally problematic? present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	<b>Is the sampled area within a wetland?</b> <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 5</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>80</u> x 4 = <u>320</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>90</u> (A) <u>340</u> (B) Prevalence Index = B/A = <u>3.78</u>
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5'</u> )				
1	<u>Cirsium vulgare</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Melilotus officinalis</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3	<u>Solidago altissima</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4	<u>Phragmites australis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5					
6					
7					
8					
9					
10					
		<u>90</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30'</u> )				
1					
2					
		<u>0</u>	= Total Cover		

## Hydrophytic Vegetation Indicators:

       Rapid test for hydrophytic vegetation

       Dominance test is >50%

       Prevalence index is ≤3.0\*

       Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

       Problematic hydrophytic vegetation\* (explain)

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

## Hydrophytic vegetation present?

N

Remarks: (Include photo numbers here or on a separate sheet)

## SOIL

Sampling Point: 5B

## Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-8							Coal	
8+							Fill	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

## Hydric Soil Indicators:

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

## Indicators for Problematic Hydric Soils:

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

## Restrictive Layer (if observed):

 Type: Gravel fill  
 Depth (inches): 8+

Hydric soil present? N

## Remarks:

Gravel fill was encountered at 8 inches in the soil profile.

## HYDROLOGY

## Wetland Hydrology Indicators:

## Primary Indicators (minimum of one is required; check all that apply)

- |  |
|--|
| <input type="checkbox"/> Surface Water (A1)                        |
| <input type="checkbox"/> High Water Table (A2)                     |
| <input type="checkbox"/> Saturation (A3)                           |
| <input type="checkbox"/> Water Marks (B1)                          |
| <input type="checkbox"/> Sediment Deposits (B2)                    |
| <input type="checkbox"/> Drift Deposits (B3)                       |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   |
| <input type="checkbox"/> Iron Deposits (B5)                        |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |

- |   |
|---|
| <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Other (Explain in Remarks)                 |

## Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

## Field Observations:

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Saturation present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>

 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 6A  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed?

Are "normal circumstances"

Are vegetation           , soil           , or hydrology            naturally problematic?

present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>Y</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 6</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>Y</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>75</u> x 1 = <u>75</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>80</u> (A) <u>85</u> (B) Prevalence Index = B/A = <u>1.06</u>
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> Rapid test for hydrophytic vegetation <u>X</u> Dominance test is >50% <u>X</u> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Typha angustifolia</u>	<u>75</u>	<u>Y</u>	<u>OBL</u>	
2	<u>Phragmites australis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
3					
4					
5					
6					
7					
8					
9					
10					
		<u>80</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30'</u> )				<b>Hydrophytic vegetation present?</b> <u>Y</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)



## SOIL

Sampling Point: 6A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0+							Rubber liner	Soils could not be examined

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

**Hydric Soil Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

**Indicators for Problematic Hydric Soils:**

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if observed):**
 Type: Rubber liner  
 Depth (inches): 0+

Hydric soil present? N

## Remarks:

Soils could not be examined due to rubber liner.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1)             | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)       |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |

**Field Observations:**

Surface water present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	>6"
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	surface

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Crawford Site City/County: Chicago/Cook Sampling Date: 5/31/17  
 Applicant/Owner: SPACECO, Inc. State: IL Sampling Point: 6B  
 Investigator(s): T. Kehoe, T. Kessler and J. Cavaiani Section, Township, Range: S: 35, T:39N, R:13E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex  
 Slope (%): 0 Lat: 41.830182 Long: -87.721523 Datum: NAD83  
 Soil Map Unit Name Urban land NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation           , soil           , or hydrology            significantly disturbed?

Are "normal circumstances"

Are vegetation           , soil           , or hydrology            naturally problematic?

present? Yes

## SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: <u>Investigated Area 6</u>
Hydric soil present? <u>N</u>	
Indicators of wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

## VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u> = Total Cover			<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = <u>          </u>
Sapling/Shrub stratum	(Plot size: <u>15'</u> )				
1					
2					
3					
4					
5					
		<u>0</u> = Total Cover			
Herb stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> Rapid test for hydrophytic vegetation <u>      </u> Dominance test is >50% <u>      </u> Prevalence index is ≤3.0* <u>      </u> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>0</u> = Total Cover			
Woody vine stratum	(Plot size: <u>30'</u> )				<b>Hydrophytic vegetation present?</b> <u>N</u>
1					
2					
		<u>0</u> = Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)

Sample point exists on bare ground.

## SOIL

Sampling Point: 6B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0+							Rubber mat	

\*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. \*\*Location: PL = Pore Lining, M = Matrix

**Hydric Soil Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Histisol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)     |

**Indicators for Problematic Hydric Soils:**

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)    |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L)               |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)  |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12)           |
| <input type="checkbox"/> Other (explain in remarks)                 |

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

**Restrictive Layer (if observed):**
 Type: Rubber mat  
 Depth (inches): 0+

Hydric soil present? N

## Remarks:

A rubber mat restricted access below the surface of the profile.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

- |  |
|--|
| <input type="checkbox"/> Surface Water (A1)                        |
| <input type="checkbox"/> High Water Table (A2)                     |
| <input type="checkbox"/> Saturation (A3)                           |
| <input type="checkbox"/> Water Marks (B1)                          |
| <input type="checkbox"/> Sediment Deposits (B2)                    |
| <input type="checkbox"/> Drift Deposits (B3)                       |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   |
| <input type="checkbox"/> Iron Deposits (B5)                        |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |

- |   |
|---|
| <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Other (Explain in Remarks)                 |

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

**Field Observations:**

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>
Saturation present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>

 (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks: